

## CLAIMS

WHAT IS CLAIMED IS:

1. A genetically engineered mammalian cell that  
5 has been mutated by a process comprising the insertion  
of a recombinantly manipulated polynucleotide sequence  
into a gene in said genetically engineered mammalian  
cell wherein said gene is identifiable as corresponding  
to at least one of SEQ ID NOS: 1-248.

10 2. The genetically engineered mammalian cell of  
Claim 1, wherein said cell is murine.

15 3. A cell according to Claim 2, wherein said cell  
is an embryonic stem cell.

20 4. The genetically engineered mammalian cell of  
Claim 1, wherein said polynucleotide sequence is present  
on a viral vector.

25 5. A cell according to Claim 4, wherein said viral  
vector is a retroviral vector.

30 6. A cell according to Claim 4, wherein said viral  
vector additionally comprises regions of targeting DNA  
that facilitate gene targeting by homologous  
recombination.

7. An isolated murine embryonic stem cell line  
comprising an engineered retroviral gene trap vector in  
at least one gene comprising a polynucleotide sequence  
identifiable as corresponding to any one of SEQ ID NOS:  
1-248.

